ABSTRACT

BACKGROUND: Orthopaedic interest groups (OIGs) are student-run organizations that can provide medical students with early exposure to orthopaedic surgery. OIGs can serve as venues for musculoskeletal education, clinical experiences, and mentorship to students with otherwise limited access to orthopaedics. The purpose of this study was to evaluate the prevalence and opportunities offered by OIGs.

METHODS: The websites of all allopathic medical schools in the United States were evaluated. Each website was examined for an established OIG and any pertinent information regarding shadowing, research opportunities, lectures, workshops, or opportunities to interact with residents. OIGs were categorized based on the number and type of offerings provided to their members.

RESULTS: Of the 141 allopathic medical school websites evaluated, 108 (108/141, 76%) had evidence of an orthopaedic interest group. Sixty-nine (69/108, 64%) of these schools described the opportunities provided. The most common opportunities were clinical skills workshops (41/69, 59%), lectures (32/69, 46%), and opportunities to interact with current residents (30/69, 43%). The majority of OIGs (39/69, 57%) offered fewer than half of the possible opportunities and only 6 groups (9%) offered all five opportunities.

CONCLUSION: The majority of allopathic medical schools in the United States have an OIG; however, the opportunities provided to orthopaedic interest group members vary widely from institution to institution.

KEYWORDS: orthopaedics, medical education, student-run interest groups, orthopaedic interest groups

INTRODUCTION

Student-created specialty interest groups (SIGs) have become prevalent in medical schools within the United States. Interest groups can serve as a foundation for like-minded students to form small communities outside of the formal medical school curriculum. Furthermore, these groups can provide medical students with opportunities to learn about and experience the diverse specialties of medicine prior to their clinical years. Several SIGs (Pediatrics, Family Medicine, Psychiatry, Emergency Medicine) are nationally interconnected, which allows them to provide uniform and structured opportunities at individual medical schools. Since the cost to run a SIG is relatively small and a connection between participation in a SIG and subsequent entrance into the same specialty has been demonstrated, these groups can serve as a preliminary recruitment ground. The connection between participation in a SIG and subsequent entrance into the specialty has been well-described for general surgery and family medicine; however, this potential link has not been studied within the field of orthopaedic surgery. The majority of medical students who pursue orthopaedic surgery as a career make this decision prior to their third- and fourth-year clinical rotations, supporting the potential role of pre-clinical experiences in SIG. Furthermore, numerous studies have shown that exposure to elective orthopaedic lectures and literature, musculoskeletal instruction, and formal mentorship opportunities has increased interest and application to orthopaedic residencies.

Given the limited instruction in musculoskeletal (MSK) medicine in most U.S. medical schools, orthopaedic interest groups (OIGs) may be the first exposure medical students have to MSK education. Therefore, the variety of lectures, clinical workshops, shadowing, and research opportunities provided by OIGs may be extremely influential. The primary purpose of this investigation was to evaluate the prevalence and opportunities offered by OIGs in U.S. allopathic medical schools.

We hypothesized that most medical schools would have OIGs; however, the activities and experiences provided by the groups would vary between institutions.
further explored for contact information, mentorship opportunities, and educational experiences. The presence of contact information (e-mail or phone number), listing of student leadership, and identification of faculty advisors was recorded. Mentorship opportunities included shadowing, research with faculty, or interactions with residents. Finally, the availability of lectures or workshops/skills labs was noted. Descriptive statistics were used to analyze the data.

RESULTS
The FREIDA database contained 141 allopathic medical schools, 124 of which (87.9%) included a list of SIGs on their websites. One hundred five of these schools (84.7%) had an OIG among the SIGs listed. An internet search of the 19 medical schools without an OIG reported on their website revealed that 3 additional schools with unofficial, non-university-related websites described an established OIG, bringing the total number of OIGs to 108 (77% of all medical schools). Contact information was listed by 63 of the 108 (58%) OIGs. OIG student leadership was reported by 66 (61%) of the groups, while faculty advisors were listed by only 44 of the 108 (41%) websites.

Of the 108 OIGs with an online presence, only 69 (64%) provided information regarding the opportunities available to interest group members. Twenty-three of the 69 groups (33%) reported shadowing opportunities for their members, 29 (42%) reported research opportunities, 41 (59%) highlighted workshops/clinical activities, 30 (43%) described opportunities to interact with current residents, and 32 (46%) reported that lectures were hosted by the interest group (Figure 1).

There was variability in the number of opportunities offered by the OIGs. Only 6 of the 69 OIGs (9%) reported offering all five opportunities to their members. Most OIGs (39/69, 57%) offered fewer than half of the possible opportunities. Ten of the 69 groups (14.5%) listed no specific opportunities, eleven groups (15.9%) offered one, 18 groups (26.1%) offered two, 17 of the 69 OIGs (24.6%) offered three, and seven groups (10.1%) offered four opportunities. Twenty-nine of the 69 OIGs (42%) offered both hands-on workshops and lectures related to orthopaedics and MSK medicine. The three opportunities most commonly reported together were workshops, lectures hosted by the interest group, and interactions with residents (16/69, 23%).

DISCUSSION
This investigation demonstrates that although most allopathic medical schools in the United States have OIGs, there is variability in the reported opportunities provided by each group. Previous literature demonstrates that shadowing, research, hands-on workshops, interactions with residents, and orthopaedic-related lectures are the most valuable activities for medical students interested in pursuing a career in orthopaedic surgery. These could serve as initial points of interest in further research to determine if opportunities provided by OIGs (or OIGs themselves) lead to higher rates of students matching into orthopaedic residency. In 2013, Reardon et al. surveyed 172 psychiatry residency program directors (PDs) and the psychiatry student interest group (PSIG) student leaders that belonged to the national PSIG Network listserve to identify activities that would be influential and effective at providing exposure to the field. The authors received responses from 64 PDs and 44 PSIG student leaders and determined that panel discussions with psychiatry residents or fellows, mentorship programs, case conferences, and events exploring the different psychiatry subspecialties and practice settings were most important. Unfortunately, we have found that most OIGs do not report offering these activities.

Hinchey et al. surveyed all fourth-year U.S. medical students with a military service obligation regarding membership in 18 interest groups, the benefit of participation, and their top specialty choice for residency. The authors found a positive correlation between interest group membership and entering that specialty upon graduation. The students, however, did not attribute their final specialty choice to interest group participation. Despite this discrepancy, the authors suggested continuation of interest groups as the actual and perceived benefits to students can be attained at a relatively small cost. Salna et al. tracked the national general

Figure 1. Shaded areas represent the prevalence of opportunities offered to members of orthopaedic interest groups (OIGs) at allopathic medical schools in the United States.
surgery matriculation rate and the rate specific to Columbia University College of Physicians and Surgeons (P&S). The authors noted a decline in both national and P&S rates beginning in the 1980s with a nadir (4.3%) in P&S matriculation rates that fell below the national average in the early 2000s. This low-point coincided with the foundation of their general surgery interest group and since its inception, P&S general surgery matriculation rates increased and surpassed the national average from 2002-2014. Despite the increase in matriculation, the authors acknowledge that a student’s decision to pursue a career in surgery is influenced by multiple factors.

There are several weaknesses to this investigation. Despite the important nature of this topic, there is a paucity of information available. All of the data collected in this study was based on information that could be accessed online. Medical schools that did not include information about OIGs on their websites may, in fact, have these groups, despite a lack of an online presence. Additionally, websites may not have been updated to include the most current opportunities offered by OIGs and many of these groups may provide additional opportunities for their members that were not explicitly stated online. Furthermore, a number of medical schools do not offer orthopaedic residencies, which could be another variable in the number and quality of opportunities offered to OIG members.

Our results bring attention to an important educational experience that is likely underappreciated in the field of orthopaedic surgery. Furthermore, the involvement of a nationally-based orthopaedic organization could facilitate the standardization of OIG opportunities offered to student members. The American Orthopaedic Association (AOA) or American Academy of Orthopaedic Surgeons (AAOS) may find that serving as a parent organization for a national network of OIGs can be mutually beneficial, as this would not only facilitate the expansion of MSK education to medical students, but potentially increase the membership base in one or both of these organizations as has been seen with the AMA. Currently, there is not enough data in the literature to support a direct correlation between involvement in an OIG and a higher likelihood of pursuing a career in orthopaedic surgery. This relationship is particularly difficult to prove given that students may join an OIG if they already have an interest in pursuing a career in orthopaedics since the activities offered to members often include networking with faculty and residents, education in the field, or interaction with like-minded students. However, numerous studies support the value of early exposure to orthopaedics and OIGs could be an ideal way to deliver those experiences.14–17

CONCLUSIONS

The results of this study demonstrate that while most allopathic U.S. medical schools have OIGs, there is substantial variability in the opportunities offered to students. A national effort to define the most beneficial opportunities and standardize their implementation is essential to MSK education.

References


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